AMENDMENTS TO THE CLAIMS

1-57. **(Cancelled)**

58. (**Currently Amended**) A method for down-regulating ~~on of~~ autologous OPGL in a human subject ~~n individual~~ in need thereof, the method comprising effecting presentation to the immune system of said subject ~~administering, to the individual,~~ an effective amount of an autologous, immunogenic agent that induces ~~capable of inducing~~ an immune response ~~against the~~ that cross reacts with the OPGL of said subject ~~'s OPGL~~ and thereby down-regulates the OPGL of said subject.

59. (**Currently Amended**) A method for down-regulating ~~on of~~ autologous OPGL in a human subject ~~n individual~~ in need thereof, the method comprising effecting presentation to the immune system of said subject ~~administering, tothe individual,~~ an effective amount of an autologous immunogenic agent that induces ~~capable of inducing~~ an antibody response that cross reacts with the OPGL of said subject ~~against the subject's autologous~~ and thereby down-regulates the OPGL of said subject ~~OPGL~~.

60. (**Cancelled**)

61. (**Currently Amended**) A method for treating, or ameliorating ~~or preventing~~ a disease characterized by excessive bone resorption in a human subject in need thereof, the method comprising ~~administering, to the~~ effecting presentation to the immune system of said subject,

an effective amount of an autologous immunogenic agent that induces ~~capable of inducing~~ an immune response ~~against the~~ that cross reacts with said subject's autologous OPGL, wherein said immune response comprises antibodies that neutralize said autologous OPGL and thereby down-regulate osteoclast differentiation, maturation, formation and activation and bone resorption.

62. (**Currently Amended**) A method for treating or~~,~~ ameliorating ~~or preventing~~ a disease characterized by excessive bone resorption in a human subject in need thereof, the method comprising administering~~,~~ to ~~the~~ said subject~~,~~ an effective amount of an autologous immunogenic agent that induces ~~capable of inducing~~ an antibody response ~~against the~~that cross reacts with said subject's autologous OPGL, wherein said antibody response comprises antibodies that neutralize said autologous OPGL and thereby down-regulate osteoclast differentiation, maturation, formation and activation, and wherein said immunogenic agent is an OPGL polypeptide comprised of the sequence set forth in SEQ ID NO: 2.

63. – 66. **(Cancelled)**

67. (**Currently Amended**) A method for treating or ameliorating disease characterized by excessive bone resorption comprising administering to a human subject suffering from or in danger of suffering from osteoporosis ~~at risk or in need thereof~~ an effective amount of an autologous immunogenic agent that induces ~~capable of inducing~~ an immune response ~~against the~~ that cross reacts with the OPGL of said subject, ~~'s autologous OPGL~~wherein said immune response comprises antibodies that neutralize said autologous OPGL and thereby down-regulate osteoclast differentiation, maturation, formation and activation.

68. (**Currently Amended**) A method for treating or ameliorating disease characterized by excessive bone resorption comprising administering to a human subject suffering from or in danger of suffering from osteoporosis ~~at risk or in need thereof~~ an effective amount of an autologous immunogenic agent that induces ~~capable of inducing~~ an antibody response against the OPGL of said subject, ~~'s autologous OPGL~~wherein said antibody response comprises antibodies that neutralize said autologous OPGL and thereby down-regulate osteoclast differentiation, maturation, formation and activation, and wherein said immunogenic agent is an OPGL polypeptide comprised of the sequence set forth in SEQ ID NO: 2.

69. (**Currently Amended**) The method according to any one of claims 58, 59, 61, 62, 67 or 68, wherein ~~the~~ said immunogenic agent is presented to the immune system of said subject as a peptide immunogen, a nucleic acid immunogen and/or a non-pathogenic organism ~~selected from the group consisting of a polypeptide vaccine, a nucleic acid vaccine, a live vaccine, and a viral vaccine~~.

70. (**Currently Amended**) The method according to any one of claims 58, 59, 61, 62, 67 or 68, wherein ~~the~~ said immunogenic agent is in admixture with an adjuvant.

71. **(New)** The method according to any one of claims 58, 59, 61, 62, 67 or 68, wherein said ~~immunogenic~~ immunogenic agent is an OPGL polypeptide ~~is~~ comprised of at least one member selected from the group consisting of amino acids 159-317 of SEQ ID NO: 2; amino acids 171-

193 of SEQ ID NO: 2; amino acids 199-219 of SEQ ID NO: 2; amino acids 222-247 of SEQ ID NO: 2; and amino acids 257-262 of SEQ ID NO: 2.

72. **(New)** The method according to claim 69, wherein said non-pathogenic organism is bacteri at least one member selected from the group consisting of attenuated Mycobacterium bovis, Streptococcus spp., E. coli, Salmonella spp., Vibrio choerae, Shigella, vaccine and pox virus.

73. **(New)** The method according to claim 70, wherein said adjuvant is at least one member selected from the group consisting of dimethyldioctadecylammonium bromide, γ-inulin, Freund's complete adjuvant, Freund's incomplete adjuvant, *quillaja* saponins, RIBI, monophosphoryl lipid A, muramyl dipeptide, liposomes, immunostimulating complex matrix adjuvants, phospholipid adjuvants, cholesterol, anti-FcγRI conjugates, cytokines, CD40 ligand, CD40 antibodies, mannose, Fab, CTLA-4, dextran, PEG, starch, mannose and latex beads.

74. **(New)** The method according to any one of claims 58, 59, 61, 62, 67 or 68, wherein said immunogenic agent comprises an OPGL polypeptide.